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**COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY**

(Includes Reference to PCT International Application(s))

Attorney's Docket Number  
50435-055

As below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**A METHOD FOR ENABLING COMPREHENSIVE PROFILING OF GARBAGE-COLLECTED MEMORY SYSTEMS**

the specification of which:

- is attached hereto.
- was filed as United States application Serial No. 09/856,779  
on 25 May 2001  
and was amended on \_\_\_\_\_ (if applicable).
- was filed as PCT international application Number PCT/US99/28089  
on 24 November 1999  
and was amended under PCT Article 19 on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is known to me to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) or Section 365(b) of any foreign and/or international application(s) for patent or inventor's certificate or Section 365(a) of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

**PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:**

COUNTRY (If PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC 119
PCT	PCT/US99/28089	24 November 1999	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim the benefit under 35 USC §119(e) of any United States provisional application(s) listed below.

**PRIOR PROVISIONAL APPLICATION(S):**

Application Number	Filing Date
60/109,945	25 November 1998

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) and/or 35(c) of any PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

**PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. 120:**

U.S. APPLICATIONS			STATUS (Check One)		
U.S. Application Number	U.S. Filing Date		Patented	Pending	Abandoned
PCT APPLICATIONS DESIGNATING THE U.S.					
PCT Application No.	PCT Filing Date	U.S. Serial Numbers Assigned (if any)			
PCT/US99/28089	24 November 1999	09/856,779			

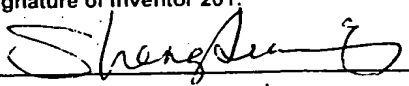
**POWER OF ATTORNEY:** As named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business the Patent and Trademark Office connected therewith: Stephen A. Becker, Reg. No. 26,527; John G. Bisbikis, Reg. No. 37,095; Christopher D. Bright, Reg. No. 46,578; Daniel Bucca, Reg. No. 42,368; Kenneth L. Cage, Reg. No. 26,151; Jennifer Chen, Reg. No. 42,404; Bernard P. Codd, Reg. No. 46,42; Lawrence T. Cullen, Reg. No. 44,489; Paul Devinsky, Reg. No. 28,553; Margaret M. Duncan, Reg. No. 30,879; Shamita De. Etienne-Cummings, Reg. No. 46,072; Ramyar M. Farid, Reg. No. 46,692; Brian E. Ferguson, Reg. No. 36,801; Michael E. Fogarty, Reg. No. 36,139; John R. Fuisz, Reg. No. 37,32; Willem F. Gadiano, Reg. No. 37,136; Keith E. George, Reg. No. 34,111; Matthew V. Grumbling, Reg. No. 44,427; John A. Hankins, Reg. No. 32,029; E. J. Kraus, Reg. No. 36,190; Catherine Krupka, Reg. No. 46,227; Jack Q. Lever, Reg. No. 28,149; Raphael V. Lupo, Reg. No. 28,363; Burman Y. Mathis, Reg. No. 44,907; Michael A. Messina, Reg. No. 33,424; Dawn L. Palmer, Reg. No. 41,238; Joseph H. Paquin, Jr., Reg. No. 31,647; Scott D. Paul, Reg. No. 42,984; William D. Pegg, Reg. No. 42,988; Robert L. Price, Reg. No. 22,685; Gene Z. Rubinson, Reg. No. 33,351; Mahshid D. Saadat, Reg. No. 48,218; Joy Ann G. Serauskas, Reg. No. 27,952; David A. Spenard, Reg. No. 37,449; Arthur J. Steiner, Reg. No. 26,106; David L. Stewart, Reg. No. 37,578; Wesley Strickland, Reg. No. 44,363; Michael D. Switzer, Reg. No. 39,552; Daniel S. Trainor, Reg. No. 43,959; Kelli N. Watson, Reg. No. 47,17; Cameron K. Weiffenbach, Reg. No. 44,488; Aaron Weisstuch, Reg. No. 41,557; Edward J. Wise, Reg. No. 34,523; Jeffrey A. Woller, Reg. No. 48,04; Alexander V. Yampolsky, Reg. No. 36,324; and Robert W. Zelnick, Reg. No. 36,976, all of McDermott, Will & Emery.

**Send Correspondence to:**  
 McDERMOTT, WILL & EMERY  
 600 13<sup>th</sup> Street, N.W.  
 Washington, D.C. 20005-3096

**Direct Telephone Calls to:**  
 (name and telephone number)  
 (202) 756-8000

	Full Name of Inventor	Family Name	First Given Name	Second Given Name
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	<b>Post Office Address</b> 10440 Oakville Avenue Cupertino, CA 95014	<b>Post Office Address</b> 10440 Oakville Avenue	City Cupertino	<b>State &amp; Zip Code/Country</b> California 95014, USA
202	<b>Full Name of Inventor</b> Steffen Grarup	Family Name Grarup	First Given Name Steffen	Second Given Name
	<b>Residence and Citizenship</b> Palo Alto, CA (German)	City Palo Alto	State or Foreign Country California USA	Country of Citizenship Germany
	<b>Post Office Address</b> 825 Clara Drive Palo Alto, CA 94303	<b>Post Office Address</b> 825 Clara Drive	City Palo Alto	<b>State &amp; Zip Code/Country</b> California 94303, USA
	<b>Full Name of Inventor</b>	Family Name	First Given Name	Second Given Name
203	<b>Residence and Citizenship</b>	City	State or Foreign Country	Country of Citizenship
	<b>Post Office Address</b>	<b>Post Office Address</b>	City	<b>State &amp; Zip Code/Country</b>

I hereby declare that all statement made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; a further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

<b>Signature of Inventor 201:</b> 	<b>Signature of Inventor 202:</b>	<b>Signature of Inventor 203:</b>
<b>Date:</b> 9/5/10/	<b>Date:</b>	<b>Date:</b>

**COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY**

Attorney's Docket Number  
50435-055

Includes Reference to PCT International Application(s)

As below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**A METHOD FOR ENABLING COMPREHENSIVE PROFILING OF GARBAGE-COLLECTED MEMORY SYSTEMS**

the specification of which:

- is attached hereto.
- was filed as United States application Serial No. 09/856,779  
on 25 May 2001  
and was amended on \_\_\_\_\_ (if applicable).
- was filed as PCT international application Number PCT/US99/28089  
on 24 November 1999  
and was amended under PCT Article 19 on \_\_\_\_\_ (if applicable).

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I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) or Section 365(b) of any foreign and/or international application(s) for patent or inventor's certificate or Section 365(a) of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

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COUNTRY (If PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC 119
PCT	PCT/US99/28089	24 November 1999	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim the benefit under 35 USC §119(e) of any United States provisional application(s) listed below.

**PRIOR PROVISIONAL APPLICATION(S):**

Application Number	Filing Date
60/109,945	25 November 1998

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) and/or §365(c) of any PCT international application(s) designating the United States of America that are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

**PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. 120:**

U.S. APPLICATIONS			STATUS (Check One)		
U.S. Application Number	U.S. Filing Date		Patented	Pending	Abandoned
PCT APPLICATIONS DESIGNATING THE U.S.					
PCT Application No.	PCT Filing Date	U.S. Serial Numbers Assigned (if any)			
PCT/US99/28089	24 November 1999	09/856,779			

**POWER OF ATTORNEY:** As named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business the Patent and Trademark Office connected therewith: Stephen A. Becker, Reg. No. 26,527; John G. Bisbikis, Reg. No. 37,095; Christopher D. Bright, Reg. No. 46,578; Daniel Bucca, Reg. No. 42,368; Kenneth L. Cage, Reg. No. 26,151; Jennifer Chen, Reg. No. 42,404; Bernard P. Codd, Reg. No. 46,414; Lawrence T. Cullen, Reg. No. 44,489; Paul Devinsky, Reg. No. 28,553; Margaret M. Duncan, Reg. No. 30,879; Shamita De. Etienne-Cummings, Reg. No. 46,072; Ramyar M. Farid, Reg. No. 46,692; Brian E. Ferguson, Reg. No. 36,801; Michael E. Fogarty, Reg. No. 36,139; John R. Fuisz, Reg. No. 37,313; Willem F. Gadiano, Reg. No. 37,136; Keith E. George, Reg. No. 34,111; Matthew V. Grumbling, Reg. No. 44,427; John A. Hankins, Reg. No. 32,029; E. J. Kraus, Reg. No. 36,190; Catherine Krupka, Reg. No. 46,227; Jack Q. Lever, Reg. No. 28,149; Raphael V. Lupo, Reg. No. 28,363; Burman Y. Mathis, Reg. No. 44,907; Michael A. Messina, Reg. No. 33,424; Dawn L. Palmer, Reg. No. 41,238; Joseph H. Paquin, Jr., Reg. No. 31,647; Scott D. Paul, Reg. No. 42,984; William D. Pegg, Reg. No. 42,988; Robert L. Price, Reg. No. 22,685; Gene Z. Rubinson, Reg. No. 33,351; Mahshid D. Saadat, Reg. No. 48,218; Joy Ann G. Serauskas, Reg. No. 27,952; David A. Spenard, Reg. No. 37,449; Arthur J. Steiner, Reg. No. 26,106; David L. Stewart, Reg. No. 37,578; Wesley Strickland, Reg. No. 44,363; Michael D. Switzer, Reg. No. 39,552; Daniel S. Trainor, Reg. No. 43,959; Kelli N. Watson, Reg. No. 47,111; Cameron K. Weiffenbach, Reg. No. 44,488; Aaron Weisstuch, Reg. No. 41,557; Edward J. Wise, Reg. No. 34,523; Jeffrey A. Woller, Reg. No. 48,011; Alexander V. Yampolsky, Reg. No. 36,324; and Robert W. Zelnick, Reg. No. 36,976, all of McDermott, Will & Emery.

**Send Correspondence to:**

McDERMOTT, WILL & EMERY  
600 13<sup>th</sup> Street, N.W.  
Washington, D.C. 20005-3096

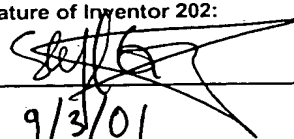
**Direct Telephone Calls to:**

(name and telephone number)

(202) 756-8000

	Full Name of Inventor	Family Name	First Given Name	Second Given Name
201	Sheng Liang	Liang	Sheng	
	<b>Residence and Citizenship</b>	<b>City</b>	<b>State or Foreign Country</b>	<b>Country of Citizenship</b>
	Cupertino, CA (USA)	Cupertino	California USA	USA
	<b>Post Office Address</b> 10440 Oakville Avenue Cupertino, CA 95014	<b>Post Office Address</b> 10440 Oakville Avenue	<b>City</b> Cupertino	<b>State &amp; Zip Code/Country</b> California 95014, USA
202	<b>Full Name of Inventor</b> Steffen Grarup	<b>Family Name</b> Grarup	<b>First Given Name</b> Steffen	<b>Second Given Name</b>
	<b>Residence and Citizenship</b> Palo Alto, CA (German)	<b>City</b> Palo Alto	<b>State or Foreign Country</b> California USA	<b>Country of Citizenship</b> Germany
	<b>Post Office Address</b> 825 Clara Drive Palo Alto, CA 94303	<b>Post Office Address</b> 825 Clara Drive	<b>City</b> Palo Alto	<b>State &amp; Zip Code/Country</b> California 94303, USA
203	<b>Full Name of Inventor</b>	<b>Family Name</b>	<b>First Given Name</b>	<b>Second Given Name</b>
	<b>Residence and Citizenship</b>	<b>City</b>	<b>State or Foreign Country</b>	<b>Country of Citizenship</b>
	<b>Post Office Address</b>	<b>Post Office Address</b>	<b>City</b>	<b>State &amp; Zip Code/Country</b>

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

<b>Signature of Inventor 201:</b>	<b>Signature of Inventor 202:</b> 	<b>Signature of Inventor 203:</b>
<b>Date</b>	<b>Date</b> 9/3/01	<b>Date</b>

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
)  
SHENG LIANG et al. ) Group Art Unit: 2187  
)  
U.S. Application No.: 09/856,779 ) Examiner: Brian R. Peugh  
Priority Application No. 60/109,945 )  
)  
Filing Date: October 3, 2001 )  
Priority Filing Date: November 25, 1998 )  
)  
For: A METHOD FOR ENABLING )  
      COMPREHENSIVE PROFILING OF )  
      GARBAGE-COLLECTED MEMORY )  
      SYSTEMS )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REVOCATION OF POWER OF ATTORNEY  
AND GRANT OF NEW POWER OF ATTORNEY**

The undersigned, a representative authorized to sign on behalf of the assignee owning all of the interest in this patent application, hereby revokes all previous powers of attorney or authorization of agent granted in this application before the date of execution hereof. The undersigned verifies that **Sun Microsystems, Inc.** is the assignee of the entire right, title, and interest in the patent application identified above by virtue of an assignment from the inventors recorded in the U.S. Patent and Trademark Office for the priority application of this case at Reel 009962, Frame 0861. The undersigned certifies that the evidentiary documents have been reviewed and to

the best of the undersigned's knowledge and belief, title is in the name of **Sun Microsystems, Inc.** Attached is a photocopy of the Notice of Recordation of Assignment for the priority application issued by the U.S. Patent and Trademark Office, together with a photocopy of the recorded Assignment for the priority application. Also attached is a Recordation of Assignment filed concurrently herewith for the present application. The undersigned hereby grants its power of attorney to Douglas B. Henderson, Reg. No. 20,291; Ford F. Farabow, Jr., Reg. No. 20,630; Arthur S. Garrett, Reg. No. 20,338; Donald R. Dunner, Reg. No. 19,073; Brian G. Brunsvold, Reg. No. 22,593; Tipton D. Jennings, IV, Reg. No. 20,645; Jerry D. Voight, Reg. No. 23,020; Laurence R. Hefter, Reg. No. 20,827; Kenneth E. Payne, Reg. No. 23,098; Herbert H. Mintz, Reg. No. 26,691; C. Larry O'Rourke, Reg. No. 26,014; Albert J. Santorelli, Reg. No. 22,610; Michael C. Elmer, Reg. No. 25,857; Richard H. Smith, Reg. No. 20,609; Stephen L. Peterson, Reg. No. 26,325; John M. Romary, Reg. No. 26,331; Bruce C. Zotter, Reg. No. 27,680; Dennis P. O'Reilley, Reg. No. 27,932; Allen M. Sokal, Reg. No. 26,695; Robert D. Bajefsky, Reg. No. 25,387; Richard L. Stroup, Reg. No. 28,478; David W. Hill, Reg. No. 28,220; Thomas L. Irving, Reg. No. 28,619; Charles E. Lipsey, Reg. No. 28,165; Thomas W. Winland, Reg. No. 27,605; Basil J. Lewris, Reg. No. 28,818; Martin I. Fuchs, Reg. No. 28,508; E. Robert Yoches, Reg. No. 30,120; Barry W. Graham, Reg. No. 29,924; Susan Haberman Griffen, Reg. No. 30,907; Richard B. Racine, Reg. No. 30,415; Thomas H. Jenkins, Reg. No. 30,857; Robert E. Converse, Jr., Reg. No. 27,432; Clair X. Mullen, Jr., Reg. No. 20,348; Christopher P. Foley, Reg. No. 31,354; Roger D. Taylor, Reg. No. 28,992; John C. Paul, Reg. No. 30,413; David M. Kelly, Reg. No. 30,953; Kenneth J. Meyers, Reg. No. 25,146; Carol P. Einaudi, Reg.


No. 32,220; Walter Y. Boyd, Jr., Reg. No. 31,738; Steven M. Anzalone, Reg. No. 32,095; Jean B. Fordis, Reg. No. 32,984; Barbara C. McCurdy, Reg. No. 32,120; James K. Hammond, Reg. No. 31,964; Richard V. Burgujian, Reg. No. 31,744; J. Michael Jakes, Reg. No. 32,824; Thomas W. Banks, Reg. No. 32,719; Christopher P. Isaac, Reg. No. 32,616; Bryan C. Diner, Reg. No. 32,409; M. Paul Barker, Reg. No. 32,013; Andrew Chanho Sonu, Reg. No. 33,457; David S. Forman, Reg. No. 33,694; Vincent P. Kovalick, Reg. No. 32,867; James W. Edmondson, Reg. No. 33,871; Michael R. McGurk, Reg. No. 32,045; Joann M. Neth, Reg. No. 36,363; Gerson S. Panitch, Reg. No. 33,751; Cheri M. Taylor, Reg. No. 33,216; Charles E. Van Horn, Reg. No. 40,266; Linda A. Wadler, Reg. No. 33,218; Jeffrey A. Berkowitz, Reg. No. 36,743; Michael R. Kelly, Reg. No. 33, 921; James B. Monroe, Reg. No. 33,971; Doris Johnson Hines, Reg. No. 34,629; Lori Ann Johnson, Reg. No. 34,498; R. Bruce Bower, Reg. No. 37,099; John Rissman, Reg. No. 33,764; Therese A. Hendricks, Reg. No. 30,389; Leslie I. Bookoff, Reg. No. 38,084; Michele C. Bosch, Reg. No. 40,524; Michael J. Flibbert, Reg. No. 33,234; Scott A. Herbst, Reg. No. 35,189; Leslie A. McDonell, Reg. No. 34,872; Thalia V. Warnement, Reg. No. 39,064; Ronald A. Bleeker, Reg. No. 27,773; Kathleen A. Daley, Reg. No. 36,116; C. Gregory Gramenopoulos, Reg. No. 36,532; Anthony M. Gutowski, Reg. No. 38,742; Lionel M. Lavenue; Reg. No. 46,859; and Christine E. Lehman, Reg. No. 38,535 all of **Finnegan, Henderson, Farabow, Garrett and Dunner, L.L.P.**, and Marc D. Foodman, Reg. No. 34,110; Anirma R. Gupta, Reg. No. 38,275; Sean P. Lewis, Reg. No. 42,798; Bernice B. Chen, Reg. No. 42,403; Noreen A. Krall, Reg. No. 39,734; Monica D. Ward, Reg. No. 40,696; Elaine K. Lee, Reg. No. 41,936; Paul D. Sorkin, Reg. No. 39,039; Marilyn E. Glaubenslee, Reg. No. 35,521; Andrew C.



Chen, Reg. No. 43,544; and Jeffrey L. Myers, Reg. No. 44,252, all of Sun  
Microsystems, Inc., 4150 Network Circle, Santa Clara, CA 95054.

Please send all future correspondence concerning this application to **Finnegan,  
Henderson, Farabow, Garrett & Dunner, L.L.P.**, 1300 I Street, N.W., Washington,  
D.C. 20005, Telephone No. (202) 408-4000.

Date: Nov. 4, 2003

By:   
Elaine K. Lee  
Senior Counsel  
Sun Microsystems, Inc.